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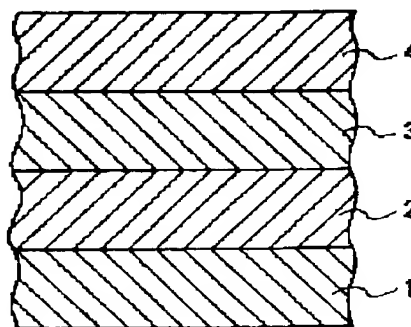
APPLICATION DATE : 25-03-92  
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APPLICANT : NEC CORP;

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TITLE : MAGNETIC STORAGE MEDIUM



ABSTRACT : PURPOSE: To provide the magnetic storage medium having high mechanical durability and recording density by forming a magnetic medium, protective film and solid lubricating layer on a substrate in this order and forming this solid lubricating layer of the alkyl chain or aryl chain adduct of fullerenes.

CONSTITUTION: This magnetic storage medium is formed with the magnetic medium layer 2, the nonmagnetic protective film 3 and the solid lubricating layer 4 of the fullerene system in this order on a glass substrate 1 which is the substrate. This solid lubricating layer 4 is the alkyl chain or aryl chain adduct of C60, C70, C85 fullerenes. The protective film 3 is formed of a nonmagnetic metal, nonmagnetic oxide, nonmagnetic nitride or nonmagnetic carbonaceous film. The C60, C70, C85 fullerenes are spherical or elliptical hollow molecules respectively constituted of 60 pieces, 70 pieces and 84 pieces of carbon atoms and have about 1nm diameter. The fullerenes themselves are semiconductors and exhibit superconductivity by doping K thereto. Since the fullerenes are the hollow molecules, the molecular structure thereof is strong and is highly resistant to destruction although the coefft. of elasticity is low. The fullerenes have an excellent wear resistant characteristic.

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